



The Standards People



# Trusted Lists & Mutual Recognition of non-EU Trust Services

Presented by: **Olivier Delos**  
**Sealed**

For: **ETSI Standards Training**  
**Webinar**

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# Agenda

✓ Subject 7 – Trusted lists



# Trusted List – what it is

EU Member States Trusted Lists are **constitutive** instruments on:

- Who is QTSP for what type of QTS
- Legal certainty with regards to QTS

Mandatory listing of QTSP/QTS

Optional listing of non-Q TSP and non-Q TS on a national basis based on national approval scheme

The Trusted List (TL) format is specified in [CID \(EU\) 2015/1505](#) building upon [ETSI TS 119 612 \(v2.1.1\)](#):

- Hierarchical structure: TL – TSP – TS – TS history
- Signed XML file
- Machine-processable information

Standard guidance for the **interpretation** of the EU MS Trusted Lists is specified in [ETSI TS 119 615](#)

The screenshot displays the 'EU Trust Services Dashboard' with a navigation bar containing 'DISCOVER', 'BROWSE', 'TRY', and 'EU LOGIN'. The main content area is titled 'Trusted List Browser' and includes a brief description of the tool's purpose. Below this, there are three search options: 'Search a trust service by type', 'Search a trust service by name', and 'Search a trust service with a signed file'. The 'Trusted Lists' section features a grid of country entries, each with a flag and the issue date. The countries listed are Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, and Sweden. At the bottom, there are links for 'European Union', 'United Kingdom' (with a note about the last known version of the UK TL), 'Statistics', and 'API Documentation'.

# Trusted List – what it is

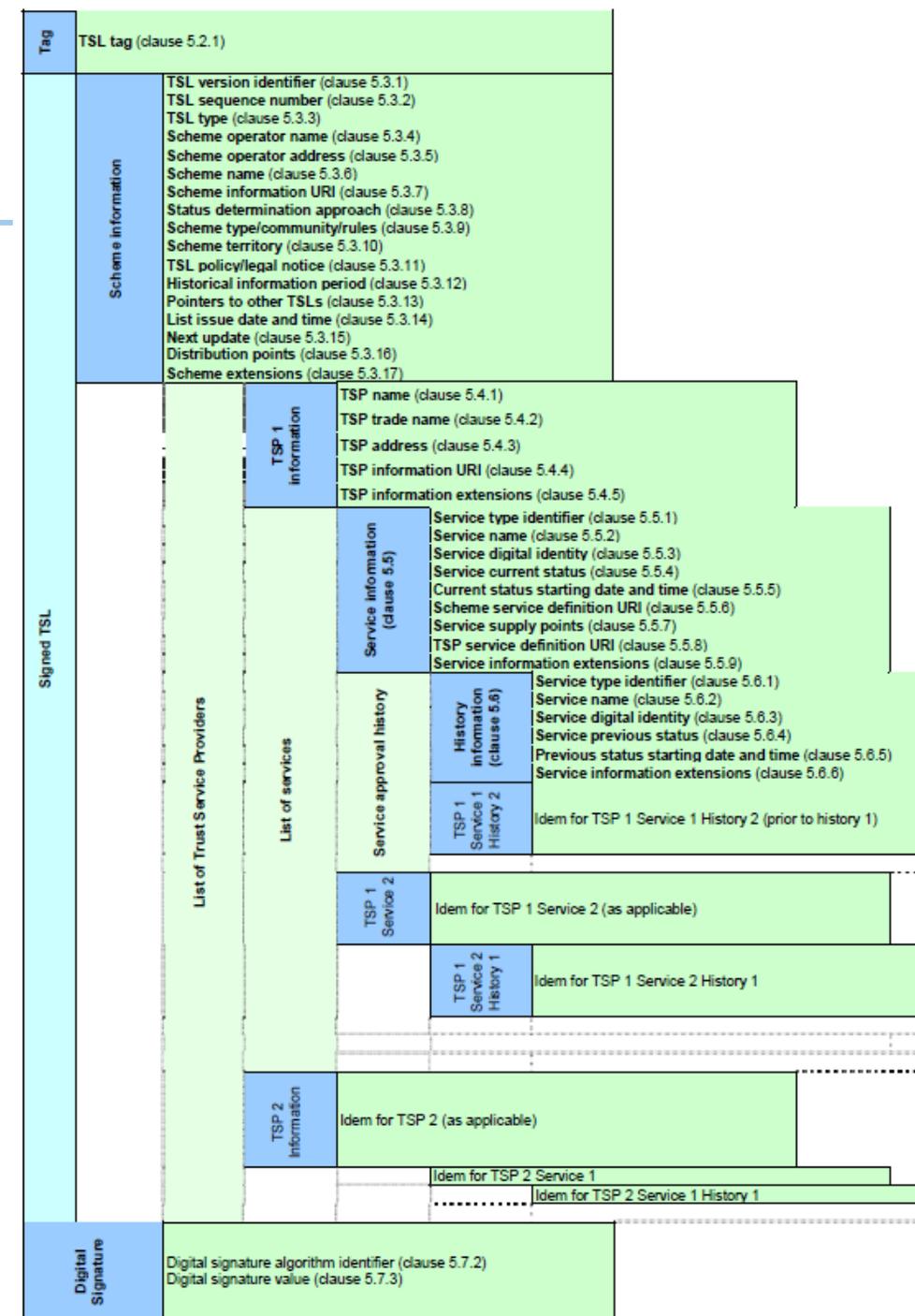
Information on the TL **scheme** and TL **operator**:

- ✔ TLSO (issuer – operator of the TL)
  - ✔ Name
  - ✔ Postal and electronic address
- ✔ Information on scheme:
  - ✔ Territory
  - ✔ URI pointing to information on supervision scheme
  - ✔ Type of the list, scheme name, legal notice
  - ✔ Date of issuance and expiry
  - ✔ Info on status values, Usage rules: how to use/interpret the TL

Pointer to other TLs (e.g. EC **LOTL**)

**List** of (Q)TSPs and the (Q)TSs they provide

- ✔ (Q)TSP (Name, postal and electronic address)
- ✔ URI pointing to information on QTSP practices (e.g. CP/CPS, GTC, legal info, etc.)
- ✔ (Q)TS service entries (per service entry)
  - ✔ “Digital Identity” (trust anchor)
  - ✔ “Service type” (and additional service information)
  - ✔ Current status (and service information extensions)
  - ✔ Full history (at least one history entry per status change)



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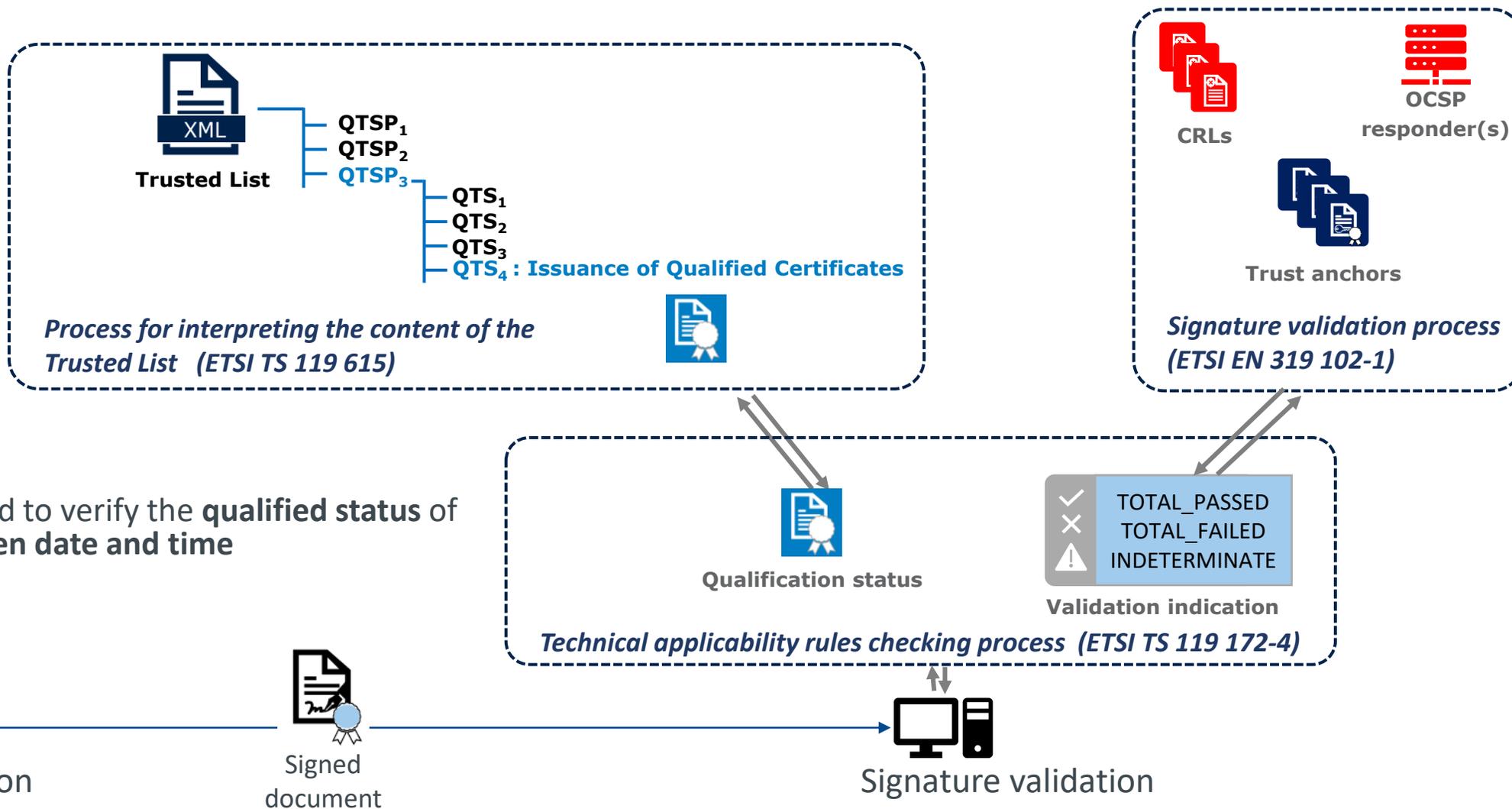
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The screenshot displays the 'Trusted List Luxembourg' interface. At the top, it shows 'Trust service providers' with a dropdown for 'Currently active trust service providers' listing 'BE INVEST International S.A.' and 'LuxTrust S.A.'. Below this, there are sections for 'Trust service providers without currently active trust services', 'Detailed information', and 'Trusted list information'. The 'Trusted list information' section is expanded to show details for 'TL - LU (Sn43)', including its availability, signature, and TL information. The 'Trust Service Provider' section is also expanded, showing details for 'LuxTrust S.A.', including its name, trade name, postal and electronic addresses, and information URI. The 'Trust Service' section is further expanded to show details for 'LuxTrust Qualified Certification Authority', including its type identifier, service name, current status, starting date, extension, and digital identity. A history table is also visible, showing the status changes of the service over time.

Availability	Available
Signature	Valid - This TL is signed and the signature is verified
TL Information	Luxembourg (Sn43) : 2021-02-26 02:00:00 - 2021-08-26 02:00:00
Pointers to Other TSL	
Trust Service Provider	
LuxTrust S.A. : <a href="https://www.luxtrust.lu/en/repository">https://www.luxtrust.lu/en/repository</a>	
Name	LuxTrust S.A.
Trade Name	VATLU-20976985
Postal Address	IVY Building - 13-15 Parc d'Activités / Capellen - L-8308 / LU
Electronic Address	mailto:info@luxtrust.lu
Information URI	<a href="https://www.luxtrust.lu/en/repository">https://www.luxtrust.lu/en/repository</a>
Trust Service	
LuxTrust Qualified Certification Authority	
Type Identifier	<a href="http://uri.etsi.org/TrstSvc/SvcType/CA/QC">http://uri.etsi.org/TrstSvc/SvcType/CA/QC</a>
Service Name	LuxTrust Qualified Certification Authority
Current Status	<a href="http://uri.etsi.org/TrstSvc/TrustedList/Svcstatus/withdrawn">http://uri.etsi.org/TrstSvc/TrustedList/Svcstatus/withdrawn</a>
Current Status	2017-02-23 01:00:00
Starting date & time	
Extension	Additional Service Information: Critical = true
Digital Identity	CN=LuxTrust Qualified CA,O=LuxTrust S.A.,C=LU
History	
LuxTrust Qualified Certification Authority : 2016-07-01 CA/QC granted	
LuxTrust Qualified Certification Authority : 2013-10-13 CA/QC undersupervision	
LuxTrust Qualified Certification Authority : 2013-10-13 CA/QC accreditationceased	
LuxTrust Qualified Certification Authority : 2009-10-13 CA/QC accredited	
LuxTrust Qualified Certification Authority : 2008-07-29 CA/QC undersupervision	
LuxTrust Time Stamping Authority : 2017-02-23 TSA/TSS-QC deprecatedatnationallevel	

# Trusted List – usage by relying parties



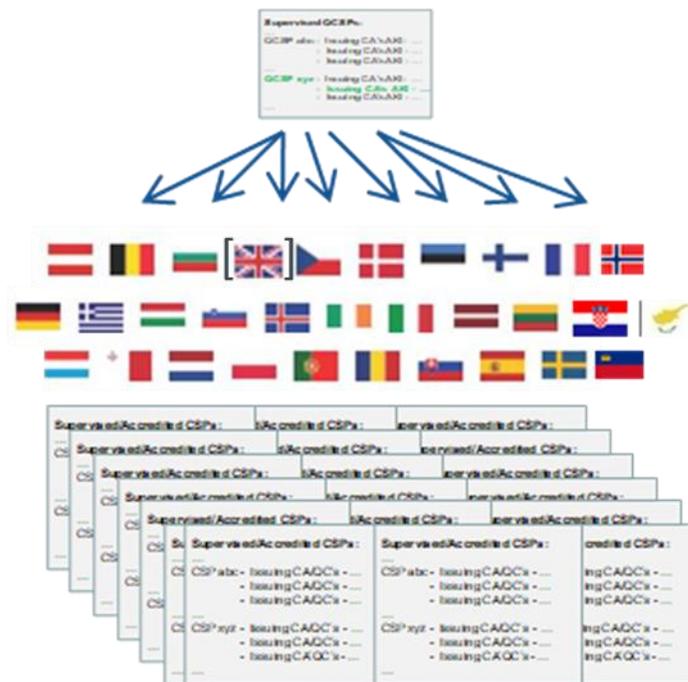
Trusted Lists are used to verify the **qualified status** of trust tokens at a **given date and time**

# Trusted List – what it is

ETSI TS 119 612 allows for Regional – Multi-country schemes

- ✓ List of the Lists (LOTL)
- ✓ Facilitating discovery, authentication and grouping of trusted lists pertaining to a common ecosystem / approval scheme

e.g. European LOTL whose authenticity and integrity can be verified via a publication in the Official Journal of the EU and [the concept of pivot-LOTL](#)



# Trusted List – what for non EU countries

ETSI TS 119 612 may be used by nonEU countries and (international) organisations to determine:

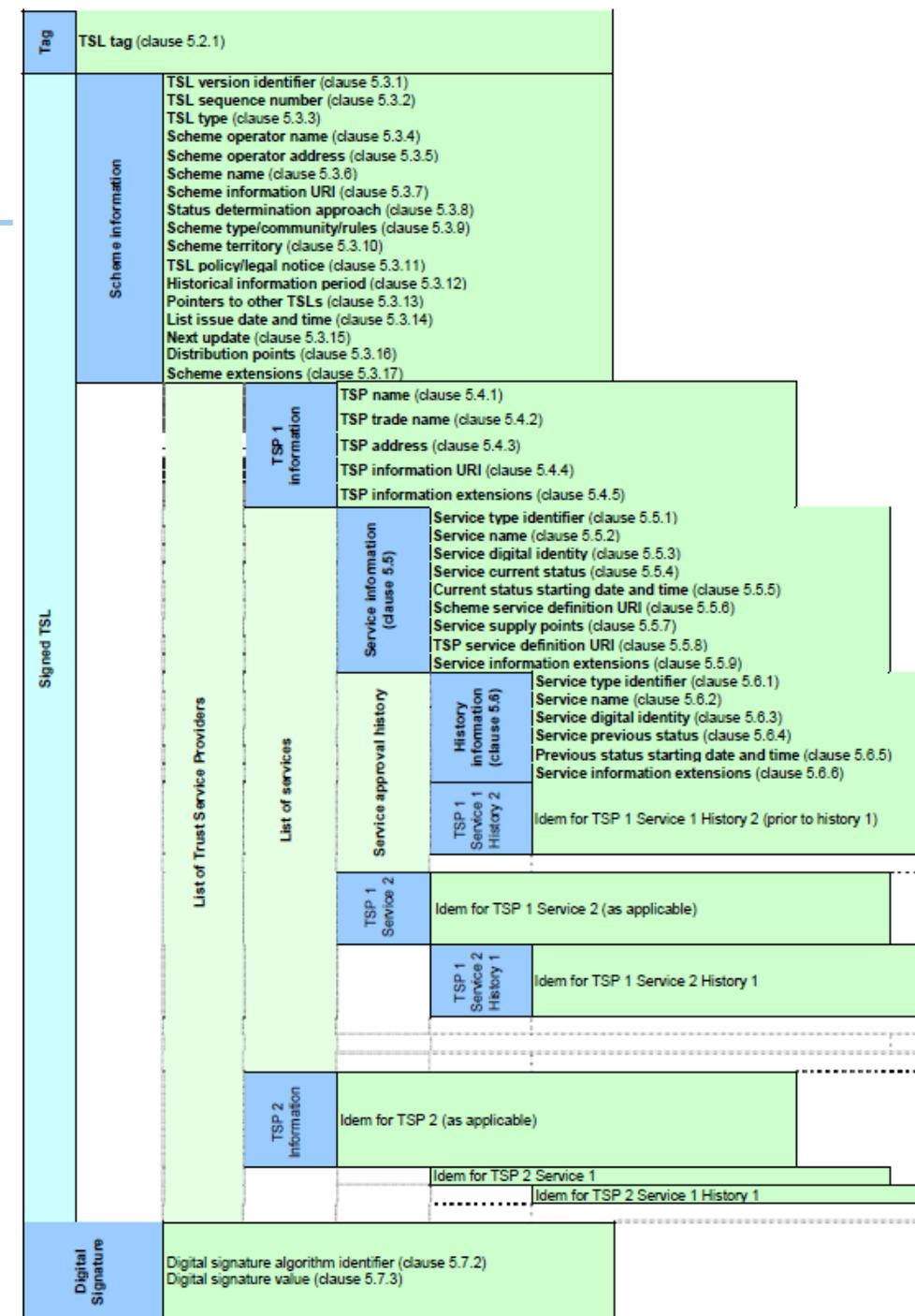
- whether a trust service is or was operating in compliance with relevant requirements,
- currently or at a given time in the past (e.g. provision time, transaction time)

Facilitates the declaration of mutual recognition between trust services and their outputs, e.g.:

- within or between groups of nations/organisations outside the EU
- Between EU and other nations/organisations outside the EU (actually use of trusted lists is a pre-requisite in this case)

## Tips/requirements

- Make use of nonEU country or organisation specific URIs for Service type identifiers, Service statuses, qualification extensions and qualifiers – Do not use eIDAS Regulation specific URIs
- Define benchmark or require use of EN 319 412-5 statements applicable to nonEU context in nonEU “qualified” certificates



# Agenda

- ✓ Subject 8 – Mutual recognition of electronic trust services



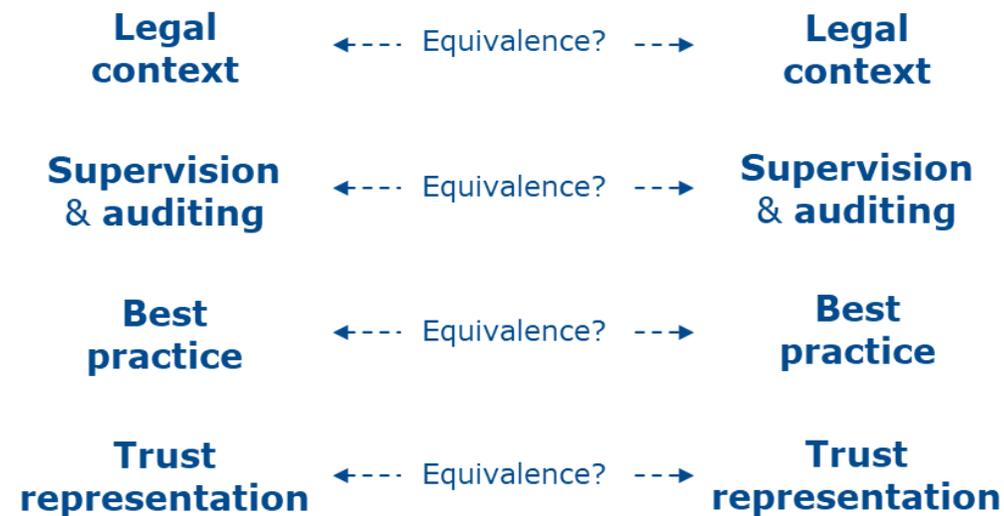
# Mutual recognition of electronic trust services

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- ✓ Various types
  - ✓ eSignatures, eSeals, time stamps, electronic delivery services, website authentication, preservation / archiving, validation, ...
  - ✓ Key building block / commodity supporting electronic transactions and digital economy
- ✓ Benefits of harmonization of
  - ✓ Laws
  - ✓ Supervision
  - ✓ Technical (best) practices
  - ✓ Trust representation
  - ✓ ... for cross-border electronic transactions and digital economies

# Mutual recognition of electronic trust services

- ✔ Looking for harmonization, interoperability & mutual recognition of electronic trust services ...
- ✔ ... Four-pillar methodology reveals useful for comparing (PKI-based) trust services frameworks (cf. [ETSI TR 103 684 report](#))
  - ✔ in a view establishing a benchmark
  - ✔ in a view establishing a national / regional framework
  - ✔ in a view of establishing recognition



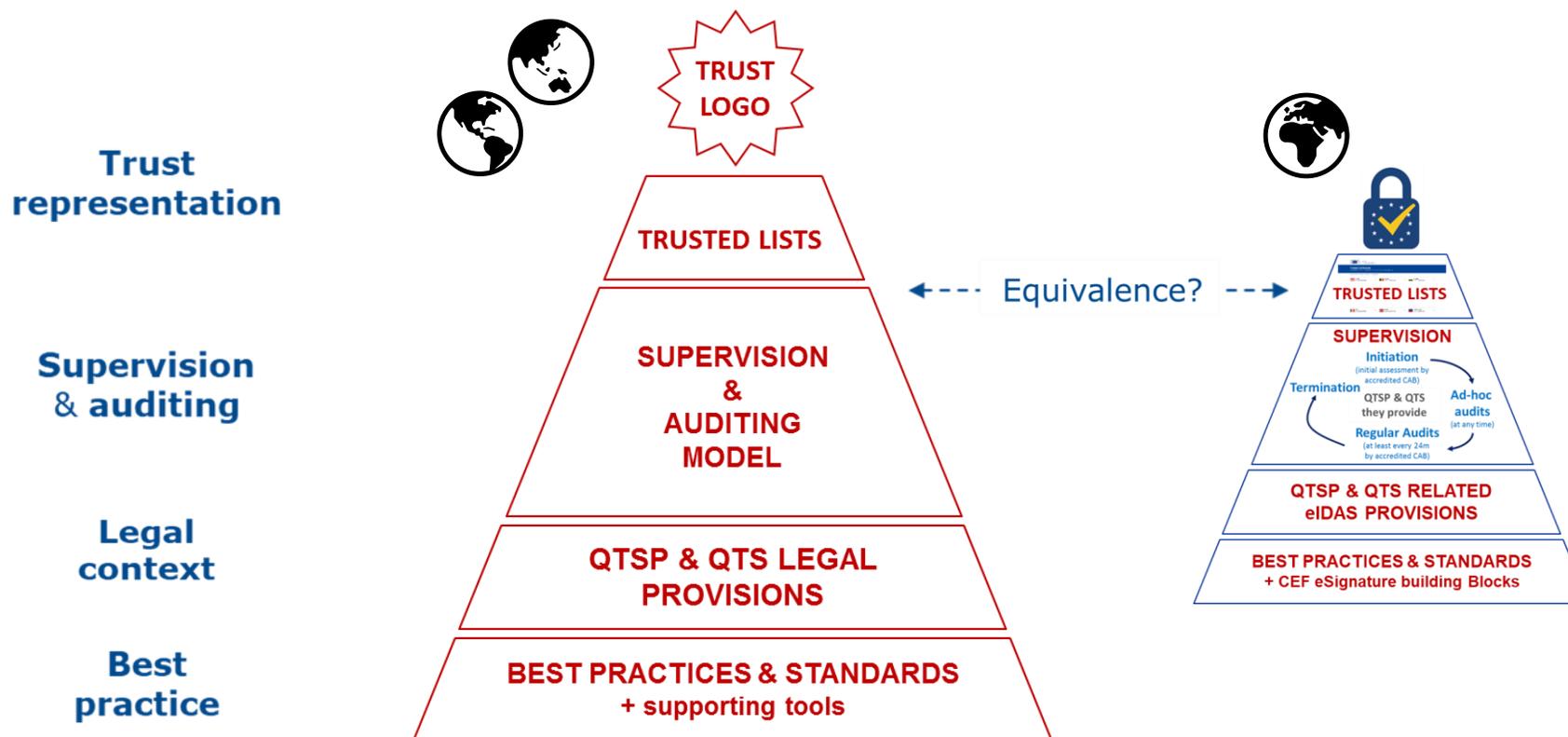
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# Mutual recognition of electronic trust services

- Four-pillar methodology
  - in a view establishing a national / regional framework

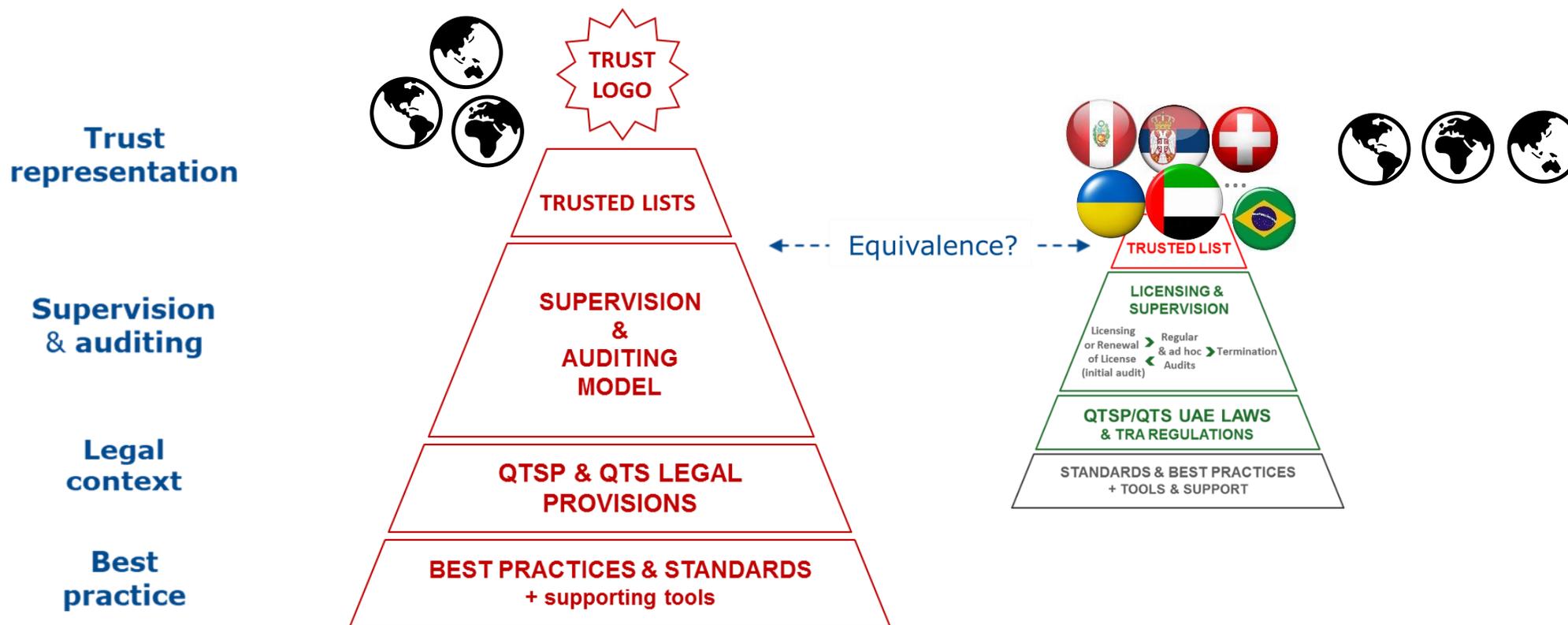


## Mutual recognition as per eIDAS Art.14:

- Trade agreement
- QTS equivalence only
- Foreign TSP/TS must meet eIDAS QTSP/QTS requirements
- Reciprocity

# Mutual recognition of electronic trust services

- Four-pillar methodology
  - in a view establishing a national / regional framework



# Mutual recognition of electronic trust services

## Legal context



←--- Equivalence? ---→

## Facilitators / Benchmarks



- ✓ Regulatory vs contractual
- ✓ General principles
  - ✓ Non-discrimination against the use of electronic means
  - ✓ Technology neutrality
    - (does not prevent being prescriptive with regards to a particular technology)
  - ✓ Functional equivalence, etc.
- ✓ Trust services, e.g.
  - ✓ Provision of certificates for signatures, seals or website/device
  - ✓ Creation / Preservation / Validation of electronic signatures / seals
  - ✓ Electronic time stamps; Electronic delivery services
  - ✓ Electronic archiving
- ✓ TSP/TS Levels of reliability
  - ✓ e.g. qualified vs non-qualified / licensed vs registered ...



UNITED NATIONS COMMISSION ON INTERNATIONAL TRADE LAW

[Working Group IV: Electronic Commerce](#)

Use and Cross border Recognition of Identity Management and Trust Services

→ Towards a Model Law in 2021 !



**eIDAS Regulation (EU) 910/2014**

Benchmark/leading example

- EU harmonisation
- Secondary legislation pointing to electronic trust services reference standards not adopted (yet)

# Mutual recognition of electronic trust services

## Legal context



- 
**Obligations of TSPs**
  -  Liability & burden of proof,
  -  Accessibility for persons with disabilities,
  -  supervision/audits,
  -  Correct operations,
  -  Security risks management,
  -  Security/Personal data breach notifications,
  -  Personal Data protection,
  -  Staff,
  -  Operations changes and termination,
  -  Insurances/Financial resources,
  -  Data recording, ...
- 
**User obligations**
- 
**Recognition by public online services / private platforms**
- 
**International aspects (mutual recognition)**

←--- Equivalence? ---→

## Facilitators / Benchmarks



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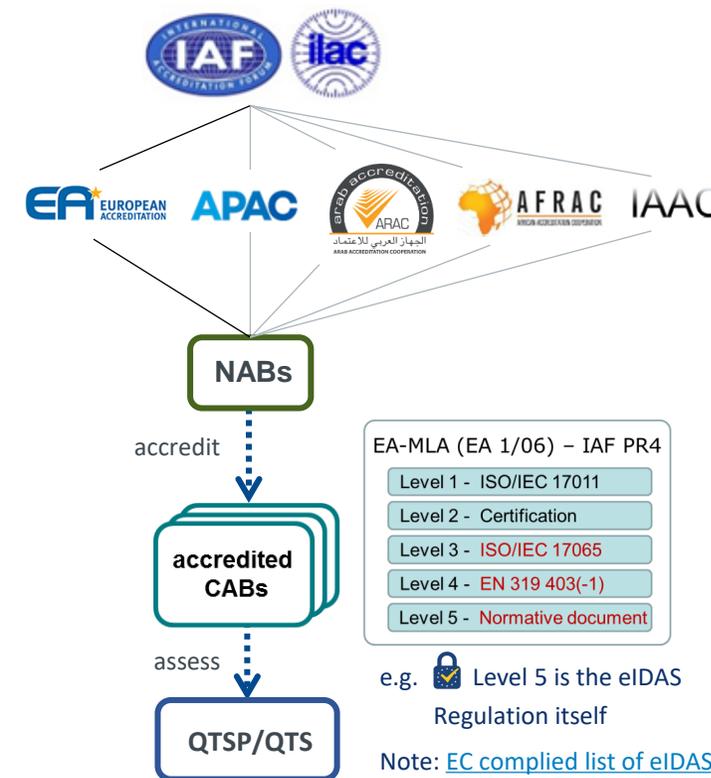
## Supervision & auditing



- ✓ Authorities approving (accrediting) auditing bodies
- ✓ Schemes to approve (accredit) auditing bodies
- ✓ Requirements on auditing bodies
  - ✓ Type of bodies
  - ✓ Conduct of assessment
  - ✓ Skills / competences
- ✓ Auditing (certification) scheme
- ✓ Assessment against what “normative document”
  - ✓ Regulation (legal requirements)
  - ✓ Technical standard
  - ✓ Mix
- ✓ Conformity assessment report
- ✓ Supervision decision
- ✓ Links into trust representation

←--- Equivalence? ---→

## Facilitators / Benchmarks



# Mutual recognition of electronic trust services

## Supervision & auditing

EA-MLA (EA 1/06) – IAF PR4

- Level 1 - ISO/IEC 17011
- Level 2 - Certification
- Level 3 - ISO/IEC 17065
- Level 4 - EN 319 403(-1)
- Level 5 - Normative document

**Level 1: ISO/IEC 17011** “Conformity assessment — Requirements for accreditation bodies accrediting conformity assessment bodies”

It specifies requirements for the competence, consistent operation and impartiality of accreditation bodies assessing and accrediting conformity assessment bodies

**Level 2: Product Certification (including processes and services)**

CABs needs to be certification bodies

**Level 3: ISO/IEC 17065** “Conformity assessment — Requirements for bodies certifying products, processes and services”

It specifies requirements relating to the competence, consistency of activities and impartiality of certification bodies for products, processes and services.

**Level 4: ETSI EN 319 403-1** “Trust Service Provider Conformity Assessment; Part 1: Requirements for conformity assessment bodies assessing Trust Service Providers”

It supplements ISO/IEC 17065 on requirements for certification bodies assessing trust service providers and the trust services they provide

**Level 5: eIDAS Regulation (EU) 910/2014**

Normative document against which the trust service providers and the trust services they provide are certified compliant (i.e. eIDAS compliance)



←--- Equivalence? ---→



The IAF MLA currently consists of the following scopes:

<b>Level 1</b>	ISO/IEC 17011 V2017, V2004										
<b>Level 2</b>	Product Certification	Management Systems Certification								Person Certification	Validation and Verification
<b>Level 3</b>	ISO/IEC 17065 V2012	ISO/IEC 17021-1 V2015						ISO/IEC 17024 V2012	ISO/IEC 14065 V2013	ISO/IEC 17029 V2019	
<b>Level 4</b>	GLOBAL G.A.P IFA General Regulations V4	ISO/TS 22003 V2013	ISO/TS 22003 V2013	ISO/IEC 17021-3 V2017	ISO/IEC 17021-2 V2016	ISO/IEC 27006 V2015	ISO 50003 V2014	ISO/IEC TS 17021-10 V2018	ICAO CORSIA ETM-Volume IV V1, ISO 14064-3:2006; ISO 14066:2011		
<b>Level 5</b>	GLOBAL G.A.P IFA Control Points and Compliance Criteria V4	ISO 22000 V2018, V2005 (FSMS)	FAMI-Qs Certification Scheme Code V5.1, V6	ISO 9001 V2015 (QMS)	ISO 14001 V2015 (EMS)	ISO/IEC 27001 V2013 (ISMS)	ISO 13485 V2016, (MDMS)	ISO 50001 V2018, V2011 (EnMs)	ISO 45001 V2018	IPC-PL-11-006	ICAO CORSIA SARPs- Annex 16 Volume IV v1

ETSI EN 319 403-1

eIDAS Reg (EU) 910/2014

- Level 1 is the endorsed normative document for Accreditation Bodies
- Levels 2 and 3 are the main scopes consisting of accreditation programs and endorsed normative documents
- Levels 4 and 5 are the sub-scopes consisting of applicable documents and endorsed normative documents

As a supplement, IAF has developed a fast-track sub-scope evaluation process based on the evaluation of the Global Food Safety Initiative (GFSI) benchmarking process of GFSI sector schemes. A corresponding Memorandum of Understanding (MoU) between IAF and GFSI was signed to facilitate the acceptance of GFSI benchmarked schemes as IAF MLA sub-scopes.

# Mutual recognition of electronic trust services

## Supervision & auditing



←--- Equivalence? ---→

## Facilitators / Benchmarks



- v Promotion of the ISO/IEC 17065 / ETSI EN 319 403(-1) at the regional and global levels
  - v Common existing framework for the recognition of certified evaluation of TSP/TS conformity against normative documents
    - v Peer-review at the level of national accreditation bodies
    - v “Certified once, accepted everywhere”
  - v Normative documents may be
    - v Regulatory documents (e.g. eIDAS Regulation)
    - v Standards
    - v Other types of (national, regional, industry) technical specifications
  - v Available from (most) existing National Accreditation Bodies
  - v Immediately available from most of the eIDAS accredited CABs
    - (cf. [EC compiled list of eIDAS accredited CABs](#))
  - v Last milestones in context of mutual recognition
    - v Equivalence of Normative documents’ requirements for specific type of TSP/TS (Legal context & Best practices pillars)
    - v Equivalence / Harmonisation of conformity assessment schemes (Best practices pillar)



# Mutual recognition of electronic trust services

## Best practice

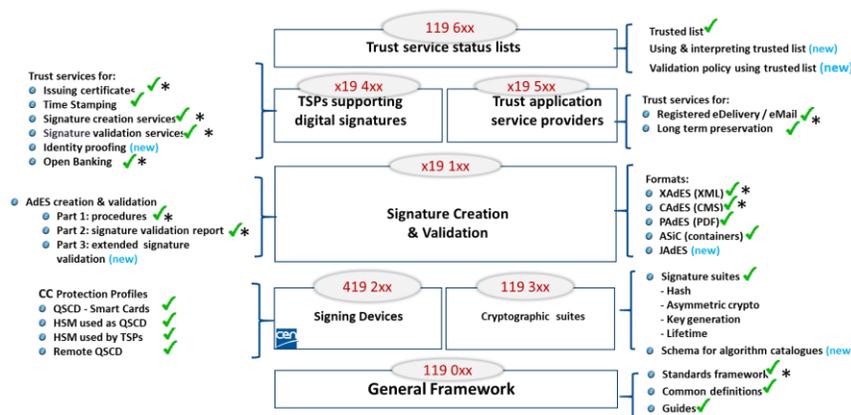


←--- Equivalence? ---→

## Facilitators / Benchmarks



- ✓ Common technical basis makes easier mutual recognition
  - ✓ Best practices
  - ✓ Interoperability
  - ✓ Structuring of requirements
    - ✓ RFC 3647 for TSP issuing certificates
    - ✓ For other types of trust services ?
  - ✓ Mapping of technical requirements versus legal requirements, when “normative documents” are not standards but laws
  - ✓ ETSI standards for trust services
    - ✓ Truly “global” standards



# Mutual recognition of electronic trust services

## Trust representation

-  Different models for representing trust
  -  Trusted lists
  -  Trust anchor stores
  -  Bridging /cross-certification
  
-  Easy to technically map between different trust representations but only meaningful when mapping other pillars
  -  Trusted list is a key instrument when seeking MR with EU  
 (cf. [CEF Pilot for the International Compatibility of Trust Services](#))



←--- Equivalence? ---→

Facilitators /  
Benchmarks



**TRUSTED LISTS**



# CEF Pilot for the International Compatibility of Trust Services

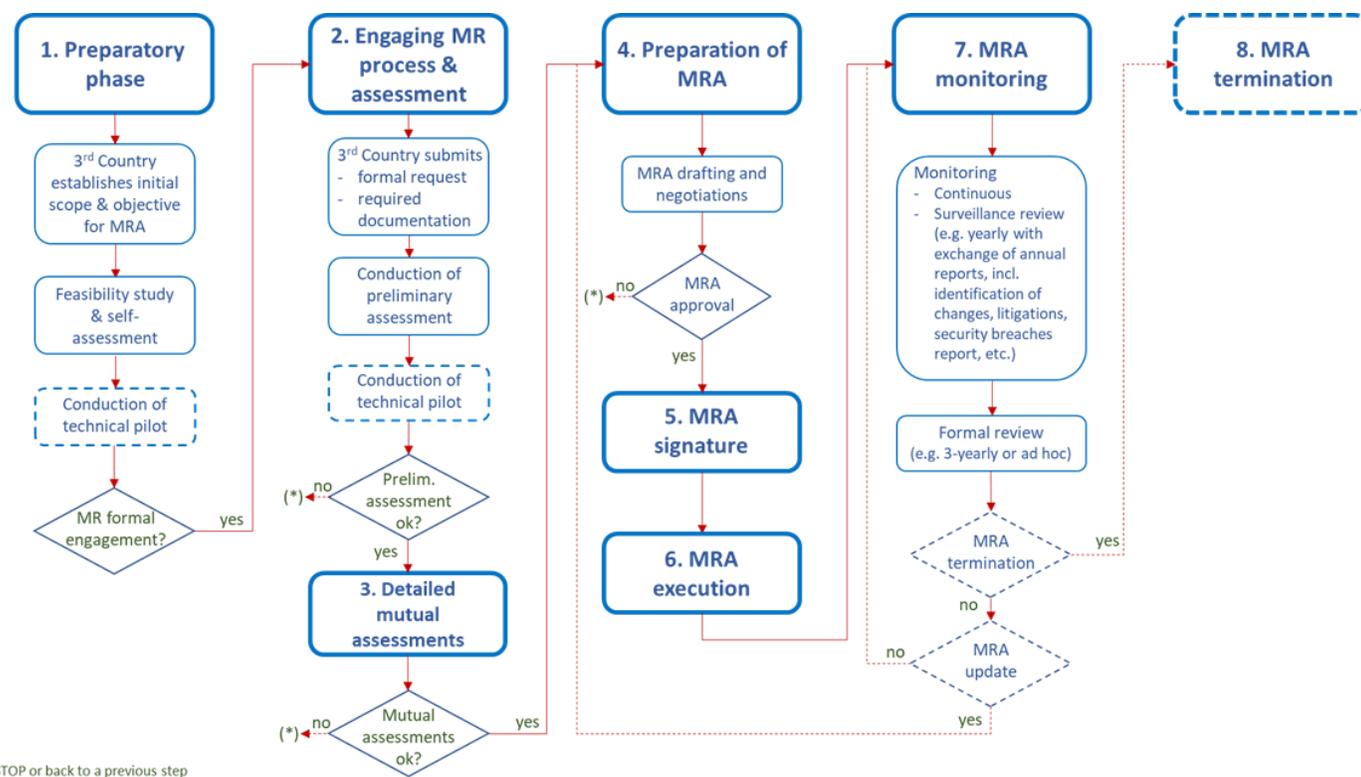
- ✔ A **generic model** to ensure 3rd Country TL compatibility with EU TLs under eIDAS (*applicable to any 3rd Country*)
- ✔ Builds upon the four-pillar equivalence assessment model of ETSI TR 103 684, focussing on technical aspects:
  - ✔ **Cookbook** with requirements for 3rd countries' alignment with EU TLs
  - ✔ **eIDAS Article 14 (self) Assessment Check-List** presenting a structured approach covering the four pillars (legal context, supervision and auditing, best practice, trust representation) for 3rd countries to perform a self-assessment on eIDAS compliance
  - ✔ **MRA element specification** (and XML Schema Definition), i.e. a "Pointer to other TSLs" including a MRAinfo element for:
    - ✔ Mapping expression of what 3rd country TS is recognised equivalent to what EU QTS and what means are respectively used to grant/withdraw approval/qualified status
    - ✔ Historical information about such recognition of equivalence
  - ✔ **MRA element usage description** incl. the necessary adaptation of standards (ETSI TS 119 615) for the validation of 3rd country electronic signatures/seals based on the content of the EU LOTL pointing to the 3rd country TL
- ✔ **Toolbox for technical pilots**
  - ✔ LOTL with pointer to 3rd Country TL mapping the 3rd Country TSP/TS trust anchors candidate for mutual recognition
  - ✔ Technical specifications and PKI-based samples
  - ✔ TL Manager & TL Browser for non-EU countries
  - ✔ Validation tool
- ✔ **Starting point** towards mutual recognition with EU on QTSP/QTS
  - ✔ Needs to be coupled with a legal assessment



# eIDAS Art.14 International recognition

Conclusion of a mutual recognition agreement (MRA) under Art.14 of eIDAS can be a long journey

- ✓ Requires a Trade agreement with the Union in accordance with Article 218 TFEU
- ✓ Eligibility of 3rd country / international organization (IO) is not automatic
- ✓ Scope of recognition (currently) limited to eIDAS closed list of 9 types of QTS
- ✓ 3rd country TSP/TS must meet the eIDAS Regulation requirements applicable to EU QTSP/QTS
- ✓ Requires equivalence of 3rd country/IO candidate TSP/TS approval/supervision (including audit) system with EU QTSP/QTS supervision (including audit) system
- ✓ A typical eIDAS Art.14 MRA life-cycle process flow



(source: CEF Pilot for the International Compatibility of Trust Services)

# CEF Pilot for the International Compatibility of Trust Services

## 📌 Requirements *(source: CEF Pilot for the International Compatibility of Trust Services)*

- 📌 3rd country TSP/TS must meet the eIDAS Regulation requirements applicable to EU QTSP/QTS
- 📌 To be recognised as **QSigCD** (resp. QSealCD), a device (EU or non-EU) must meet the requirements of eIDAS Annex II and be certified in accordance with Art.30 and CID (EU) 2016/650 by a certification body designated by an EU Member State
  - 📌 nonEU devices may be certified (+/- 10% today), nonEU bodies might be designated by EU Member States
- 📌 3rd country to establish and maintain a **trusted list** in accordance with ETSI TS 119 612 and the requirements and recommendations provided in the MRA Cookbook for listing at the least TSP/TS recognised as legally equivalent to EU QTSP/QTS
- 📌 Requirements on use of ETSI defined “QcCompliance”, “QcType” and “QcCClegislation” statements and (optional) ‘Service information extension’ (‘Sie’) ‘Qualification’ extension (‘Sie:Q’) and of the corresponding qualifiers
- 📌 The ETSI defined “QcSSCD” statement (id-etsi-qcs 4) shall not be used by QTSPs established in a 3rd country to declare that the private key related to the certified public key resides in a device that is not an EU-QSCD
- 📌 Requirement on field values for the 3rd country TL with regards to the trust service entries for which an equivalence to EU QTS is expected
  - 📌 cf Table 3 of section 3.2.1 of the Cookbook
- 📌 Use in 3<sup>rd</sup> Country TL of the MRA information element in an MRA pointer to the LOTL

+ a set of **key technical assumptions** and **recommendations** (mostly building upon ETSI standards)



# Mutual recognition of electronic trust services

## Conclusion

- ✓ Facilitators / Benchmarks for paving the way towards an Regional/International framework for electronic trust services:
  - ✓ **Legal & Regulatory**, e.g.
    - ✓ UNCITRAL Model Law on provisions on the Cross Border recognition of Identity Management and Trust Services
    - ✓ EU eIDAS Regulation ... benefiting from lessons learned (e.g. importance of secondary legislation for more balance between functional and technical specifications)
  - ✓ **Supervision & auditing**
    - ✓ Promotion of ISO/IEC 17065 & EN 319 403(-1) at regional and IAF levels
  - ✓ **Best practices**
    - ✓ Common technical basis (standards) makes easier mutual recognition (e.g. latest versions of  CENELEC &  standards)
  - ✓ **Trust representation**
    - ✓ Trusted lists
- ✓ Starting point for MRA with EU → [CEF Pilot for the International Compatibility of Trust Services](#)

